

# V&V Reference Report

## L2 ASCDS Version : 8.4.3.1

Observation 7140 - L2 Version 2  
Chandra X-Ray Center

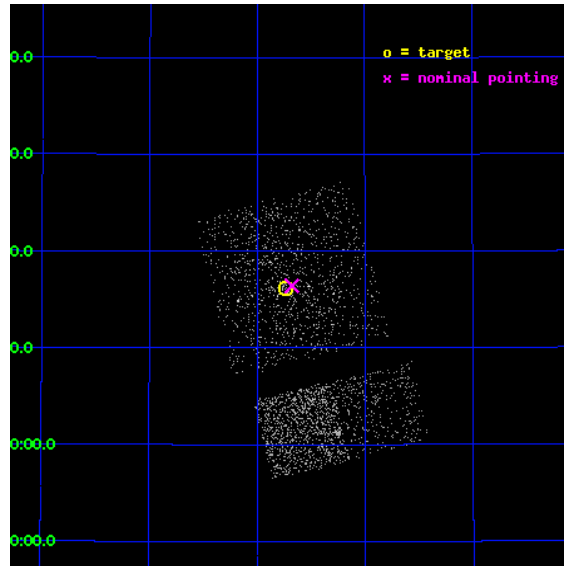
L2 Processing Date : Apr 10 2012

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# 1 Front

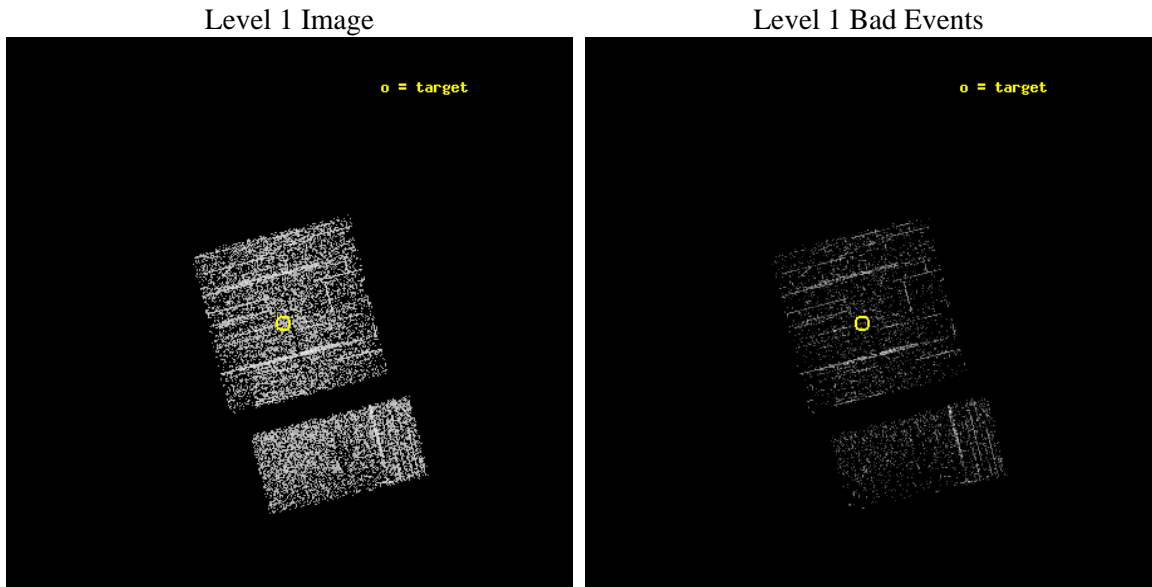
seq_num	600578	Sequence number
obs_id	7140	Observation id
title	Black Hole X-ray Novae in M31	Proposal title
observer	Dr. Michael Garcia	Principal investigator
object	M31	Source name
dtcycle	0	&#160
cycle	P	events are from which exps? P[primary] S[econdar
ra_targ	10.685	Observer's specified target RA [deg]
dec_targ	41.268972	Observer's specified target Dec [deg]
ra_nom	10.669305359536	Nominal RA [deg]
dec_nom	41.273707603681	Nominal Dec [deg]
roll_nom	165.98866806903	Nominal Roll [deg]
revision	2	Processing version of data
ontime	950.05208623409	Sum of GTIs [s]
livetime	127.99244565794	Livetime [s]
ontime0	949.92896622419	Sum of GTIs [s]
ontime1	949.97000622749	Sum of GTIs [s]
ontime2	950.01104623079	Sum of GTIs [s]
ontime3	950.05208623409	Sum of GTIs [s]
ontime6	950.10815429688	Sum of GTIs [s]
ontime7	950.09312623739	Sum of GTIs [s]
l2events	2944	Number of level 2 events



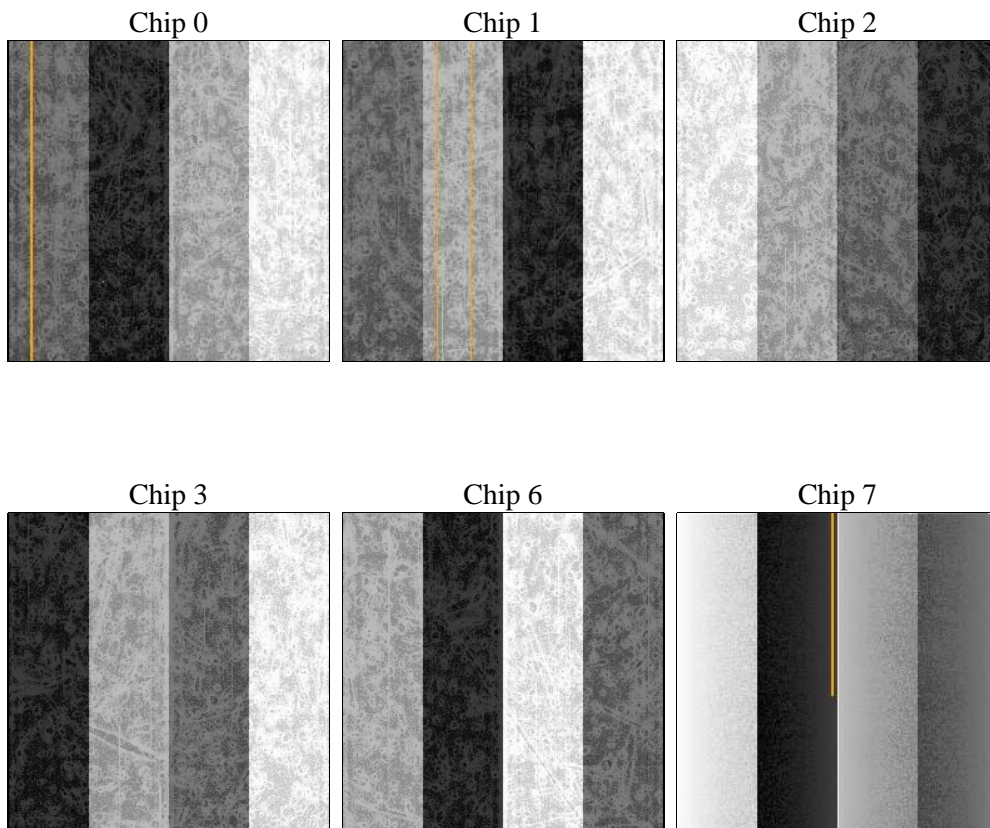
## 2 OBI Primary

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	5000.643000	[s] Scheduled observation exposure time
ascdsver	8.4.3.1	Processing system revision	ontime	950.05208623409	Sum of GTIs [s]
caldsver	4.4.9	&#160	ontime0	949.92896622419	Sum of GTIs [s]
date	2012-04-10T09:03:12	Date and time of file creation	ontime1	949.97000622749	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	950.01104623079	Sum of GTIs [s]
			ontime3	950.05208623409	Sum of GTIs [s]
			ontime6	950.10815429688	Sum of GTIs [s]
			ontime7	950.09312623739	Sum of GTIs [s]
			l1events	26718	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	4228	4562	4136	4498	5015	4279
rejected events	3857	4118	3643	4027	4623	3100
rejected %	91%	90%	88%	89%	92%	72%

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
grade 0 events	141	154	251	250	127	116
	3%	3%	6%	5%	2%	2%
grade 1 events	2	1	2	2	2	7
	0%	0%	0%	0%	0%	0%
grade 2 events	73	95	114	81	87	244
	1%	2%	2%	1%	1%	5%
grade 3 events	59	56	43	36	43	123
	1%	1%	1%	0%	0%	2%
grade 4 events	53	47	45	57	48	111
	1%	1%	1%	1%	0%	2%
grade 5 events	134	140	127	163	131	326
	3%	3%	3%	3%	2%	7%
grade 6 events	54	102	55	55	100	605
	1%	2%	1%	1%	1%	14%
grade 7 events	3712	3967	3499	3854	4477	2747
	87%	86%	84%	85%	89%	64%

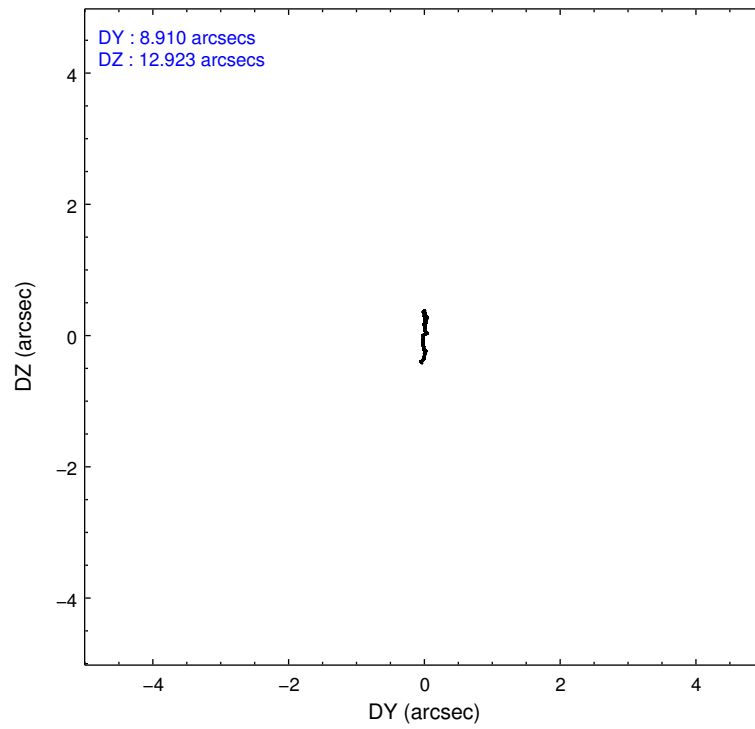
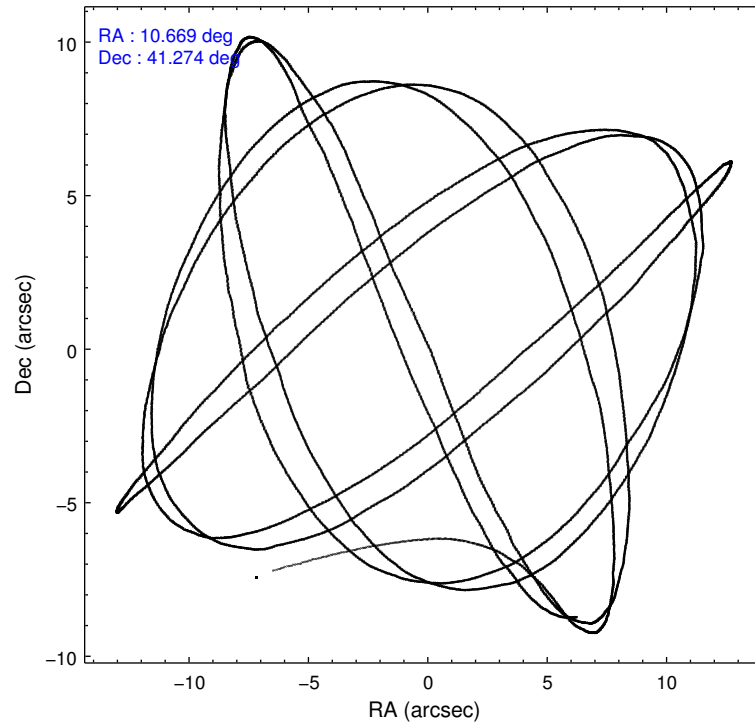


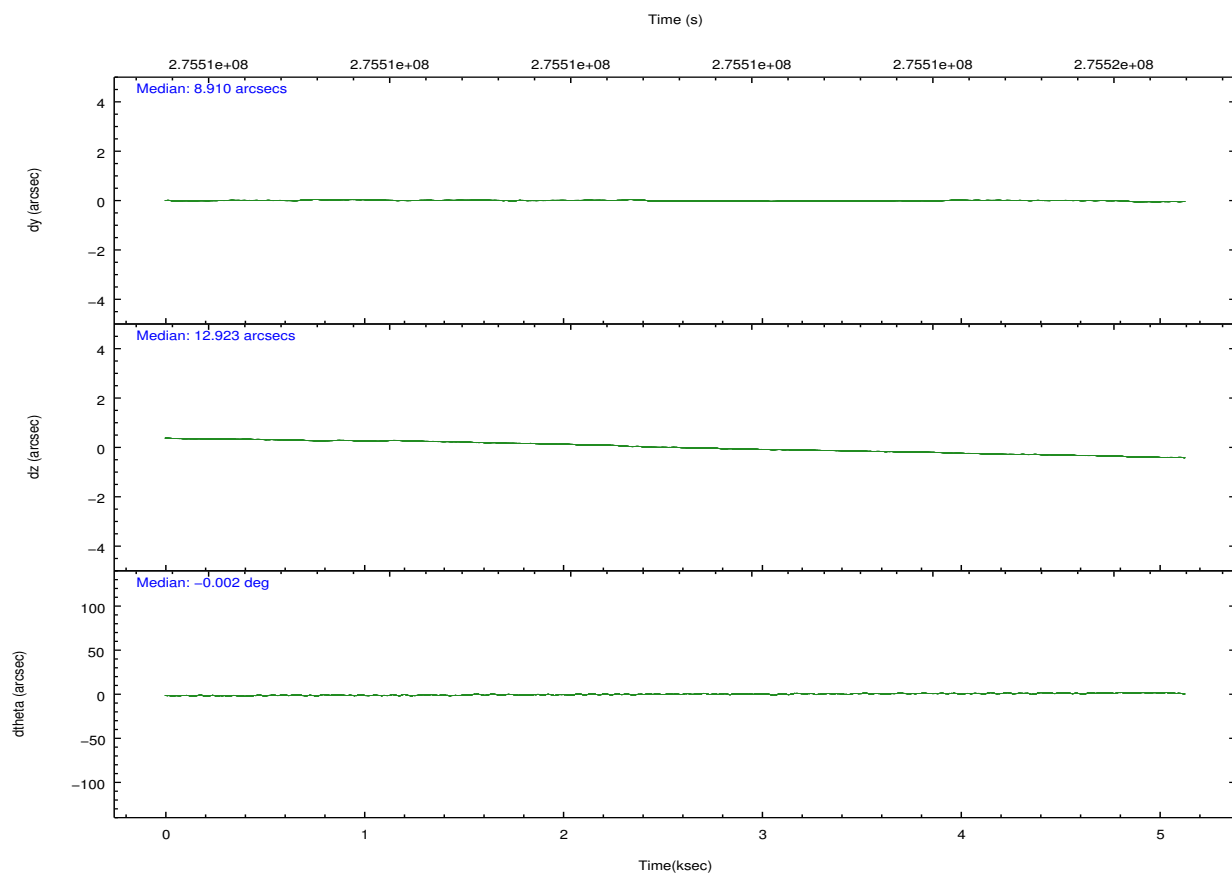
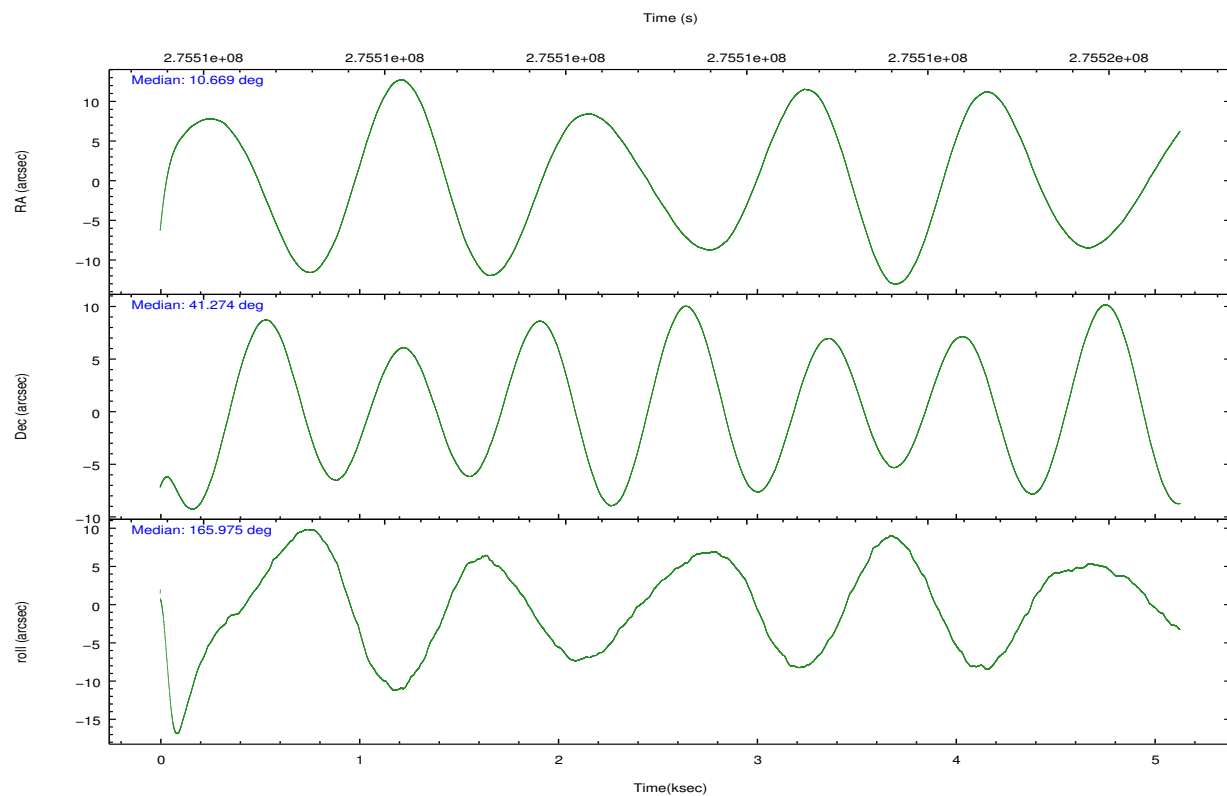
## 2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-012367	ACIS-012367
Grating	NONE	NONE
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	10.704320	10.66930535953596
[deg] Pointing Dec	41.281459	41.27370760368065
[deg] Pointing Roll	165.756841	165.9886680690336
[s] Window start time (MET)	274924865.184000	274924865.184000
[s] Window stop time (MET)	275529665.184000	275529665.184000
[mm] SIM focus pos	-0.782348	-0.7809083437167272
[mm] SIM defocus	0	0.001439871863259334
[mm] SIM translation stage pos	-233.592463	-233.5874344608287
[mm] SIM translation stage offset	0	-0.005018542100998502
[s] Observation start time (MET)	275510141.184000	275509019.9918
Observation start date	2006-09-24T18:34:36	2006-09-24T18:16:59
[s] Observation end time (MET)	275515141.184000	275515378.5796
Observation end date	2006-09-24T19:57:56	2006-09-24T20:02:58
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	Y	Y
[s] Primary exposure time	0.500000	0.5
[s] Secondary exposure time	0.000000	3.2
Duty cycle	5	5

## 2.3 Aspect



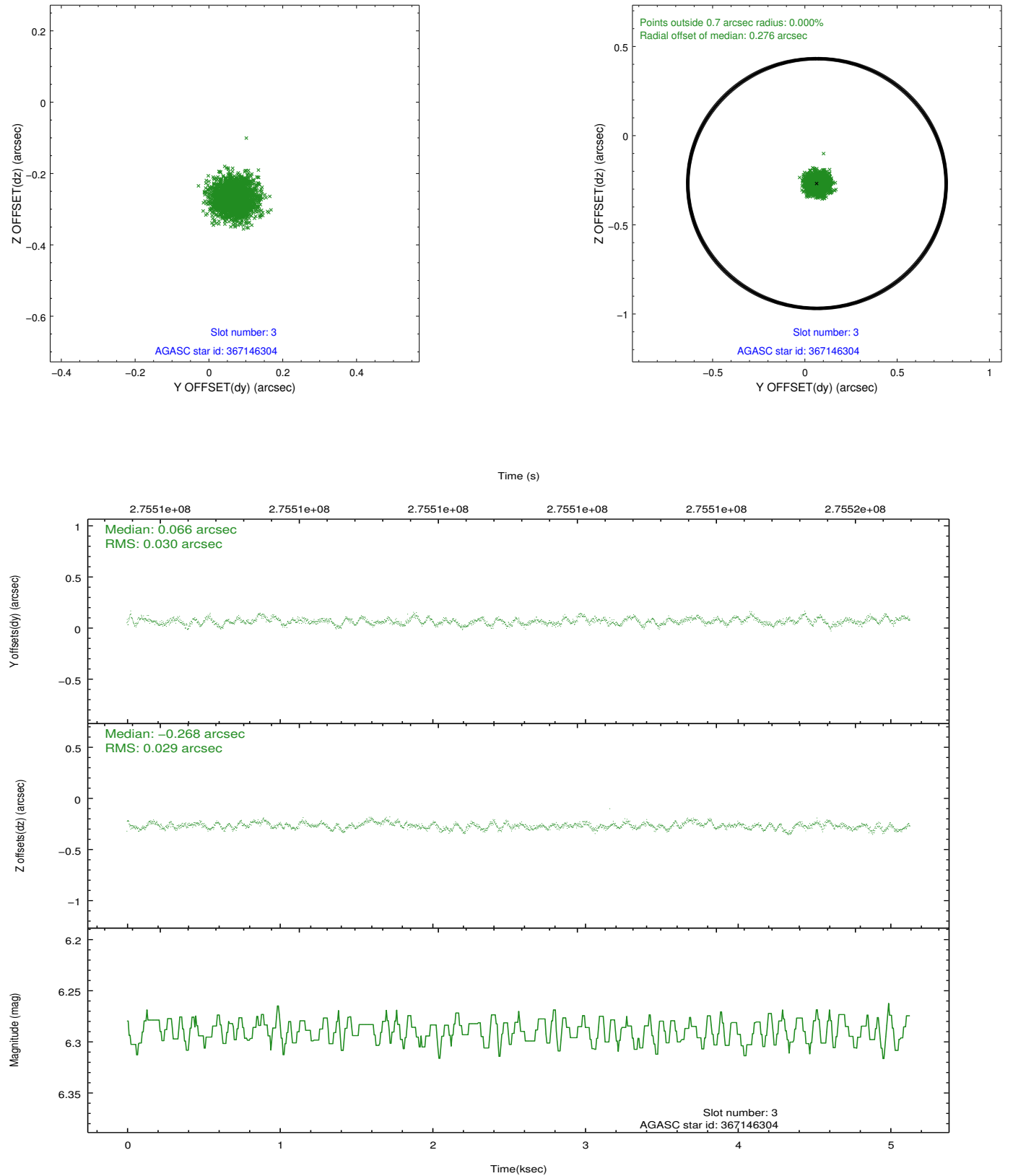


### Slot Statistics

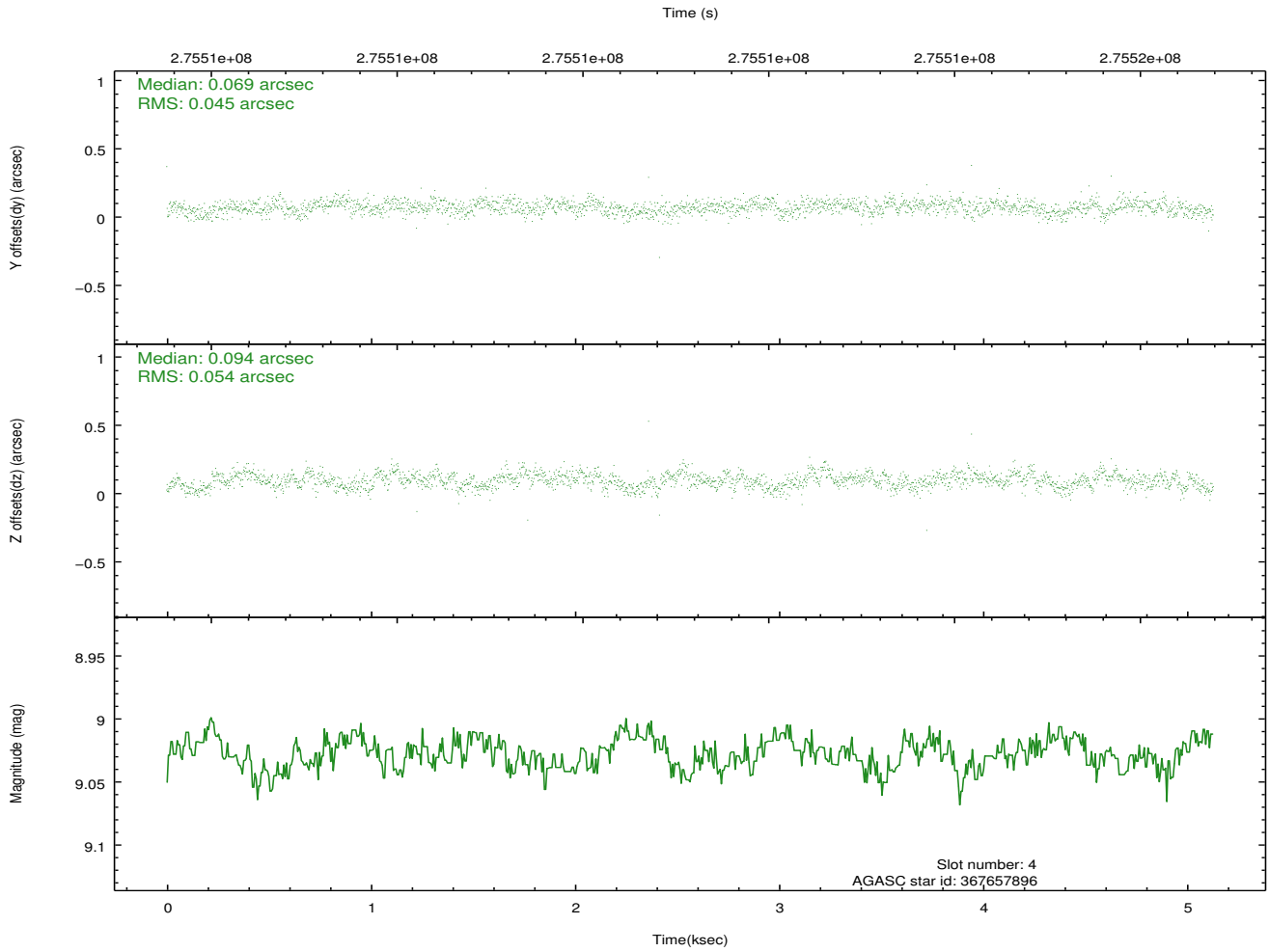
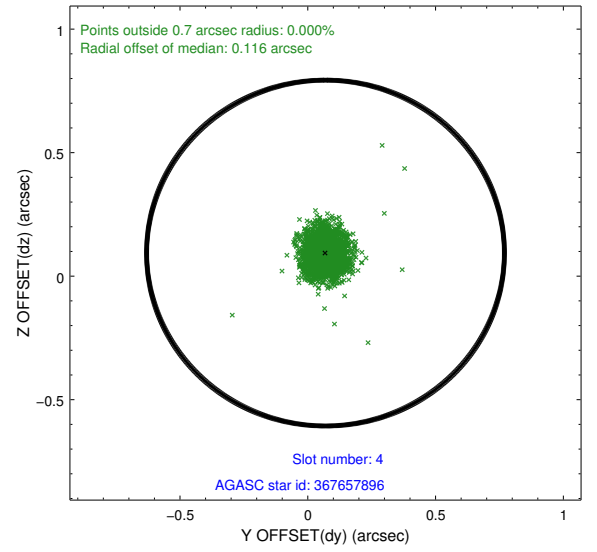
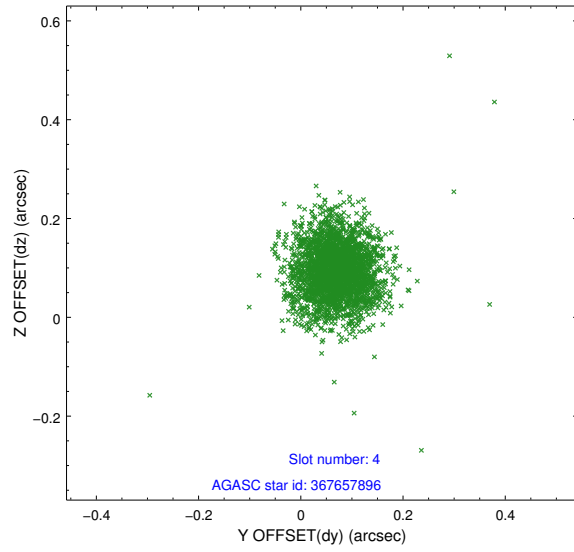
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.24	1251	0.044	-0.006	0.012	0.020	0.000000	0.000000	930.76	-836.49
1	FID	ACIS-I-5	7.23	1251	-0.195	0.056	0.008	0.014	0.000000	0.000000	-1816.92	1060.49
2	FID	ACIS-I-6	7.24	1251	0.059	0.021	0.009	0.014	0.000000	0.000000	395.05	1706.29
3	GUIDE	367146304	6.29	2503	0.066	-0.268	0.045	0.072	11.154952	40.679362	-1725.17	1794.59
4	GUIDE	367657896	9.03	2501	0.069	0.094	0.072	0.118	11.197765	41.313576	-1264.07	-443.51
5	GUIDE	367663272	9.28	2501	-0.077	0.001	0.099	0.161	10.656279	41.699429	495.91	-1426.40
6	GUIDE	367671800	9.40	2501	-0.147	0.117	0.095	0.154	10.554735	41.964935	994.51	-2286.95
7	GUIDE	367674552	8.86	2502	0.087	0.061	0.066	0.105	11.016238	41.570845	-556.60	-1218.87

## 2.4 Star Slots

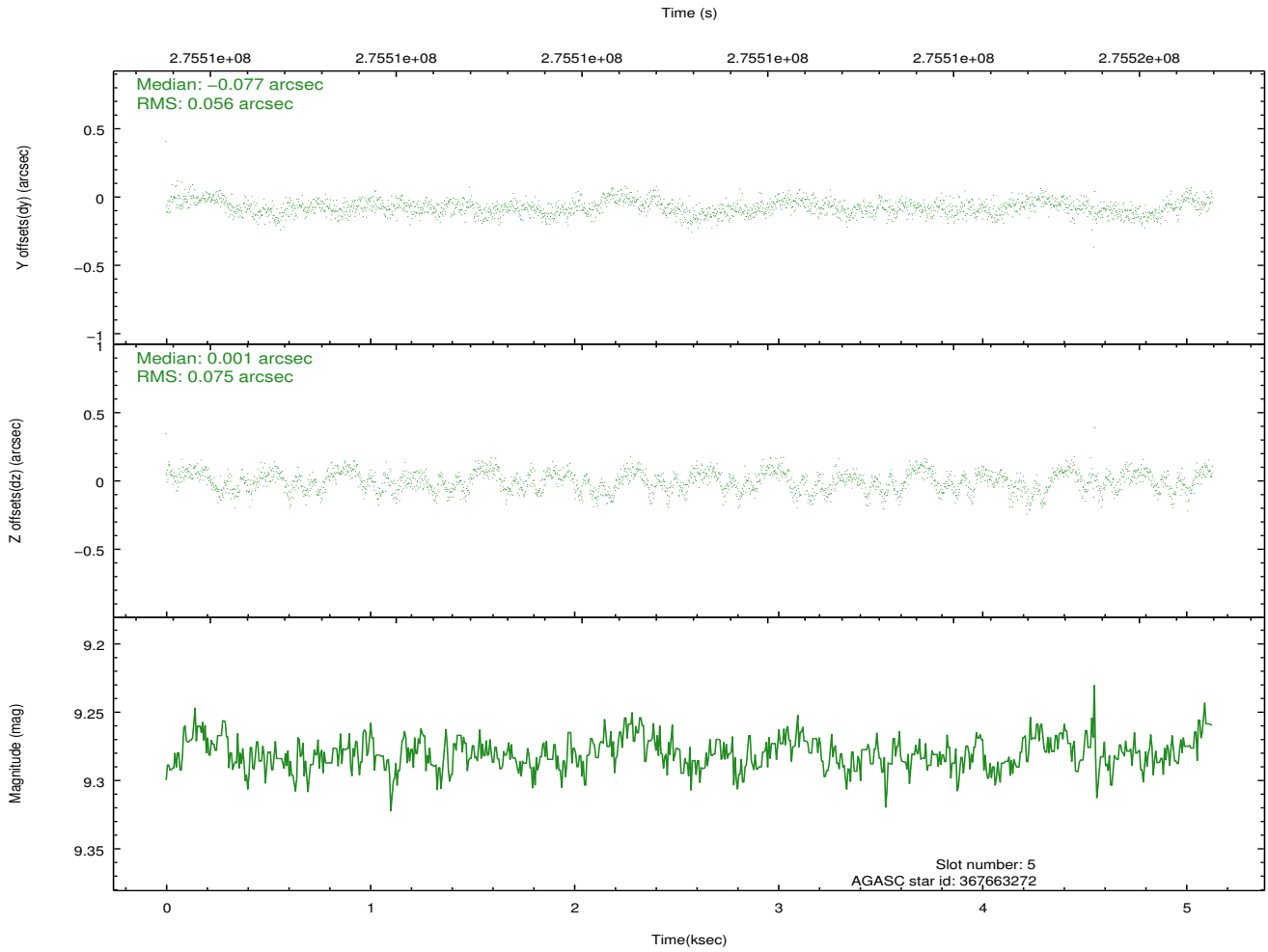
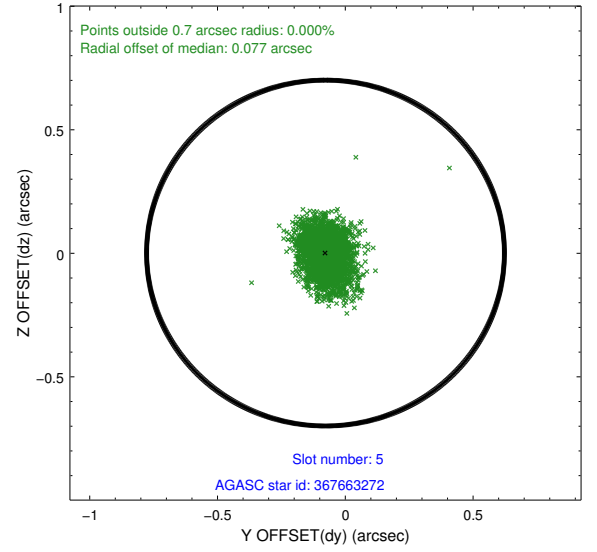
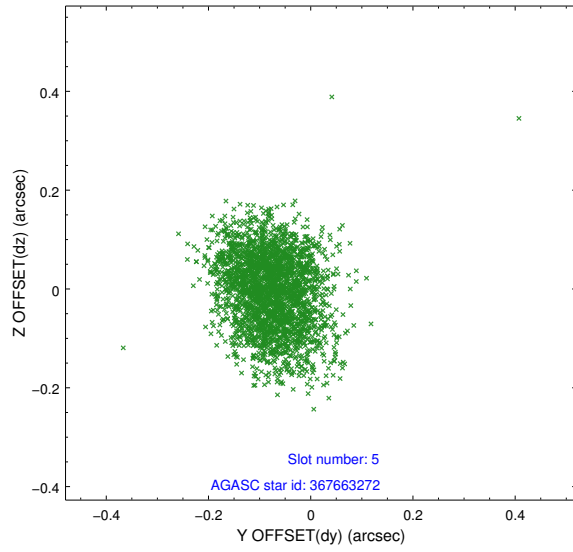
### 2.4.1 Slot 3



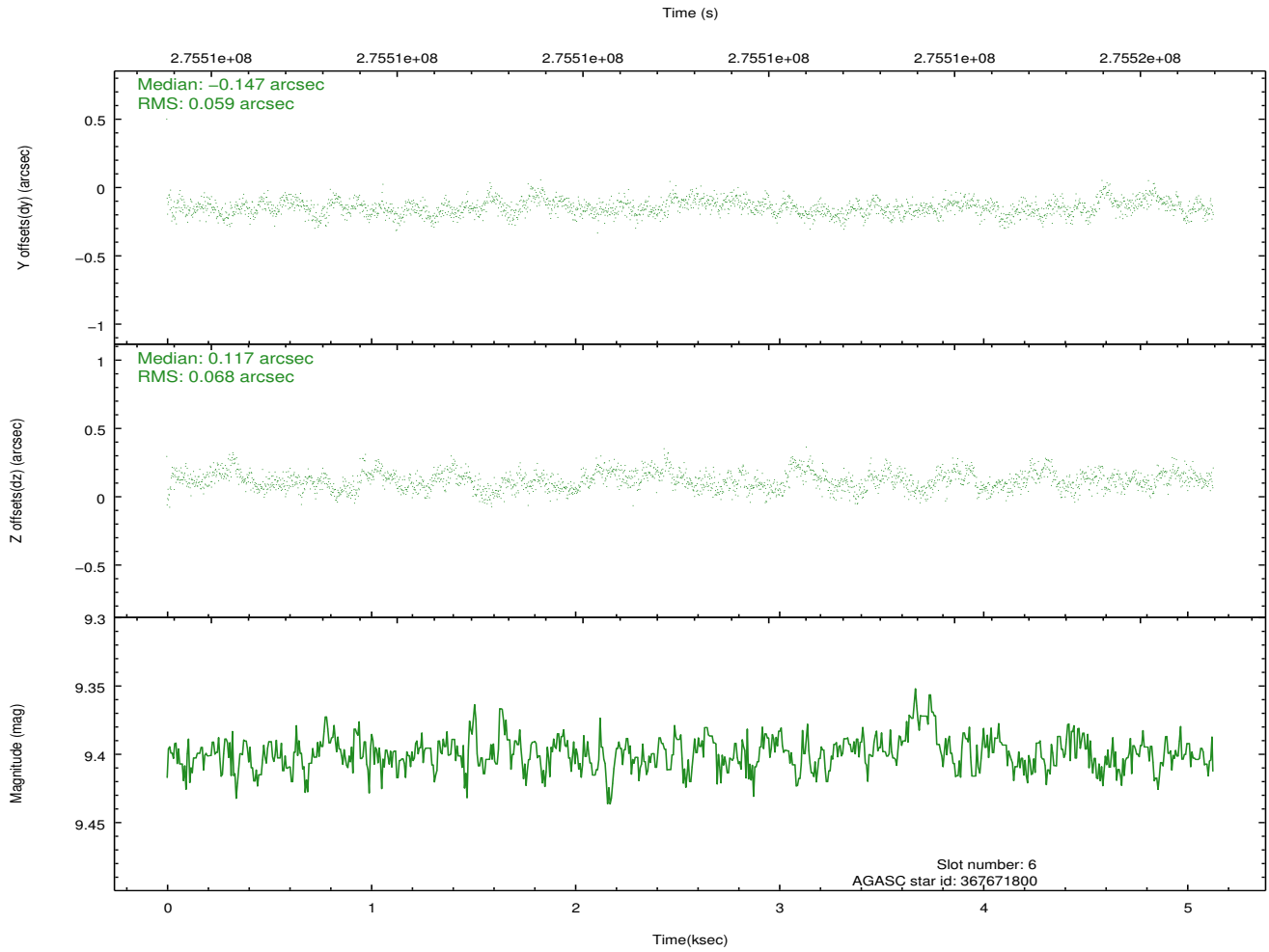
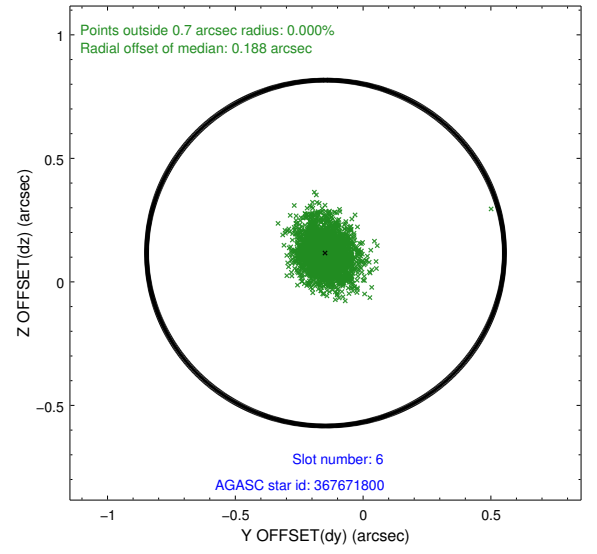
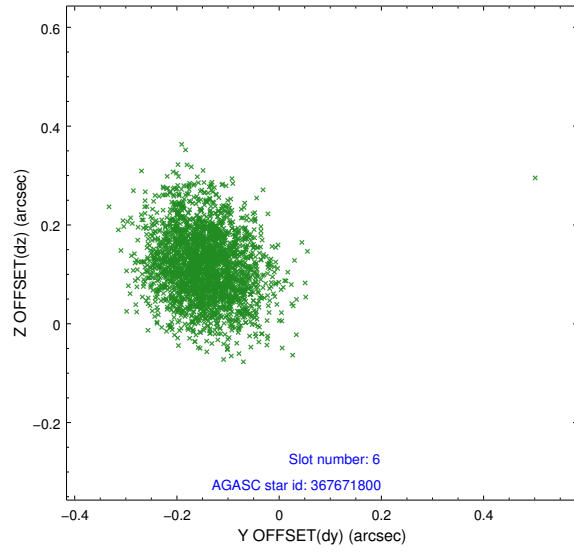
## 2.4.2 Slot 4



### 2.4.3 Slot 5

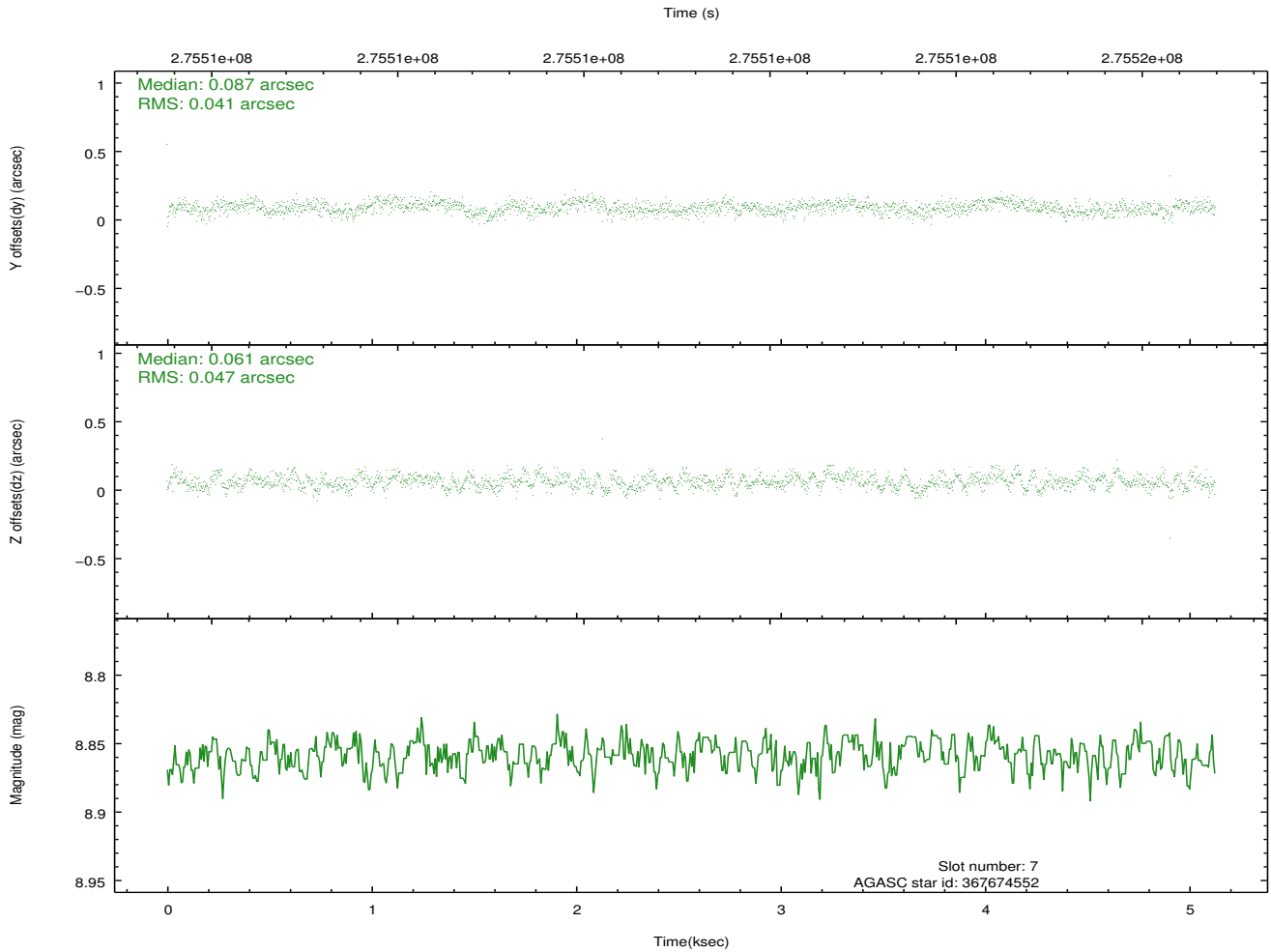
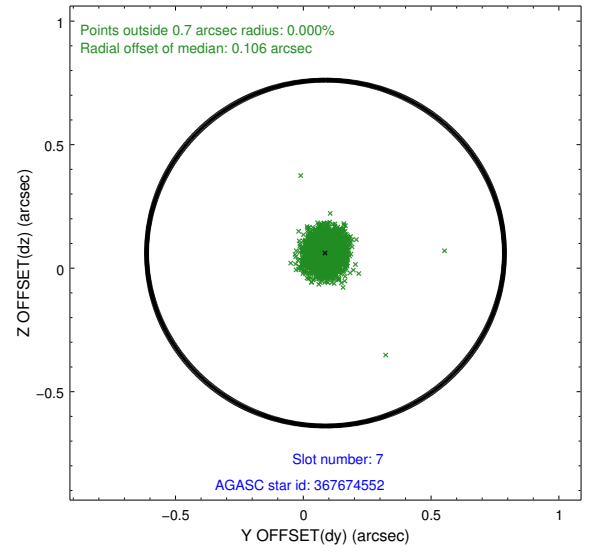
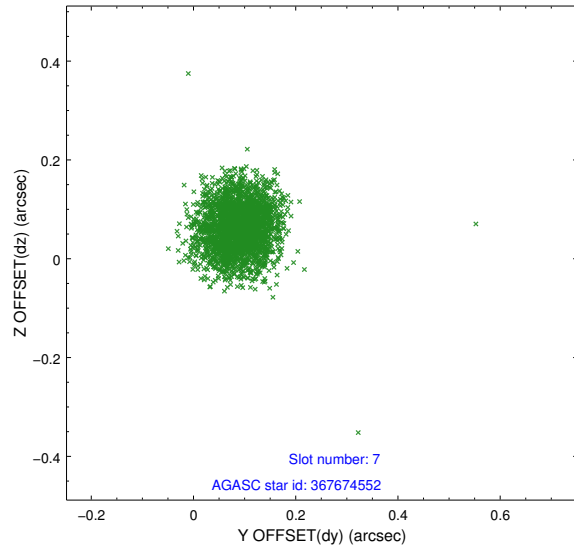


## 2.4.4 Slot 6



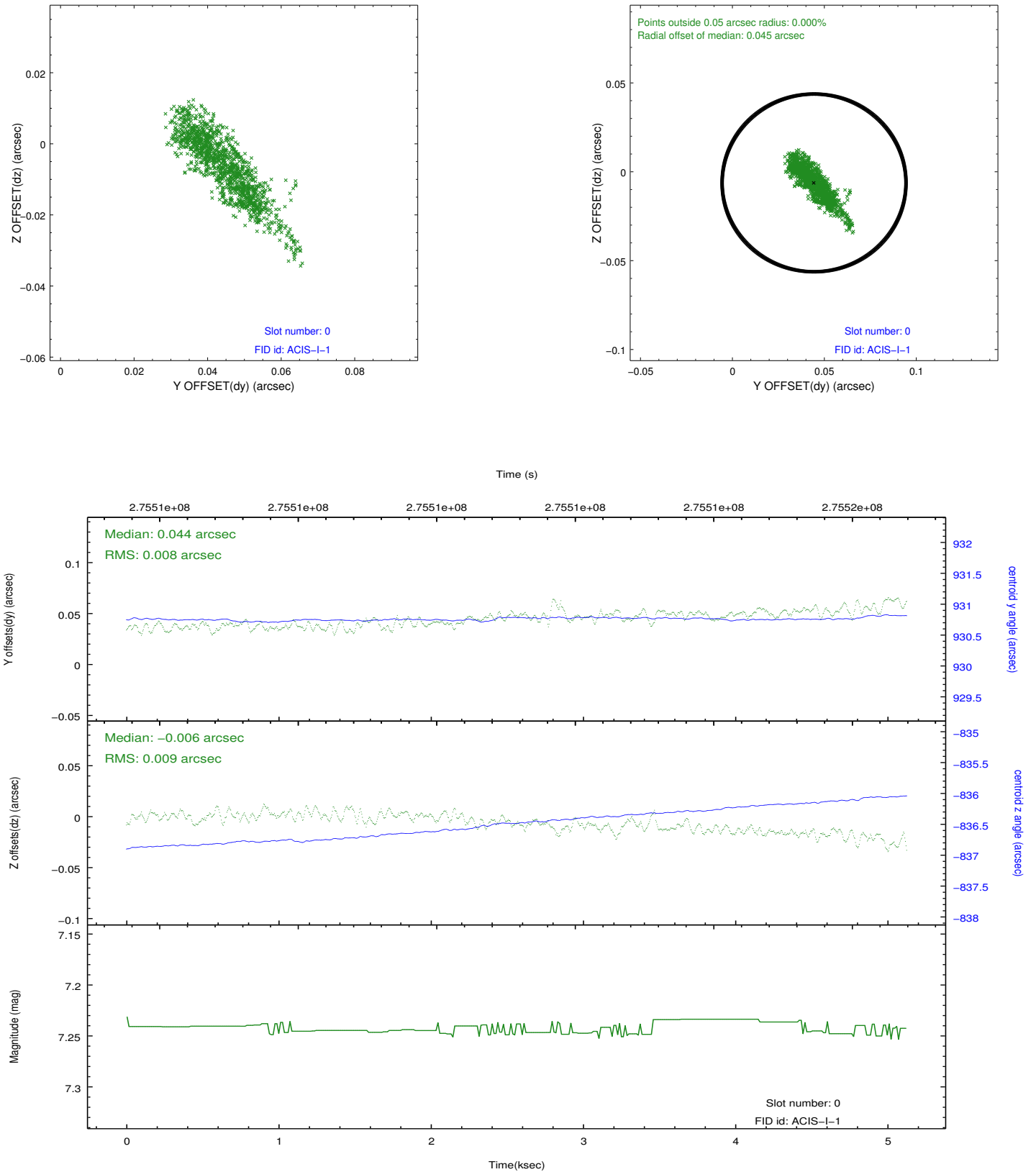


## 2.4.5 Slot 7

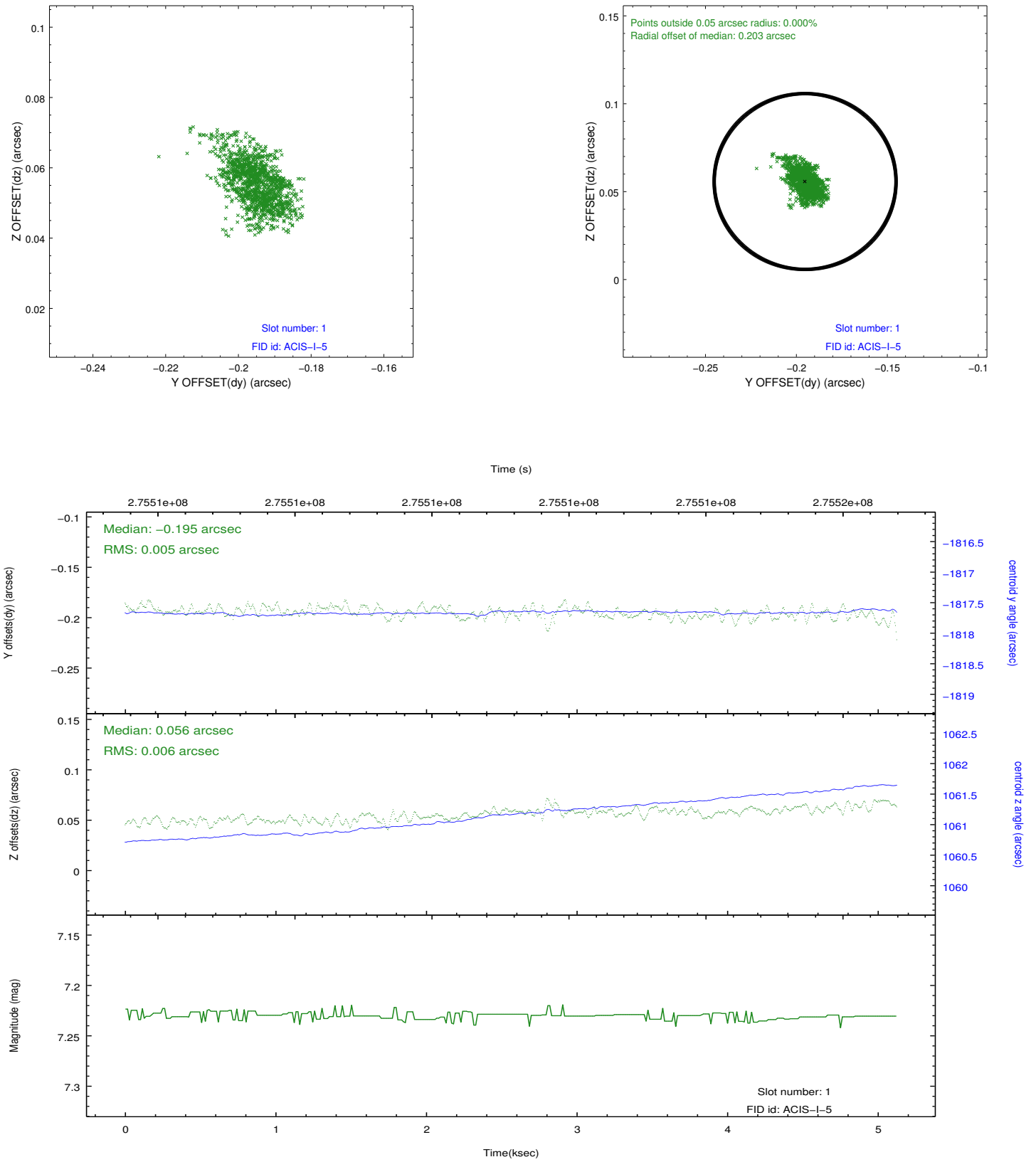


## 2.5 FID Slots

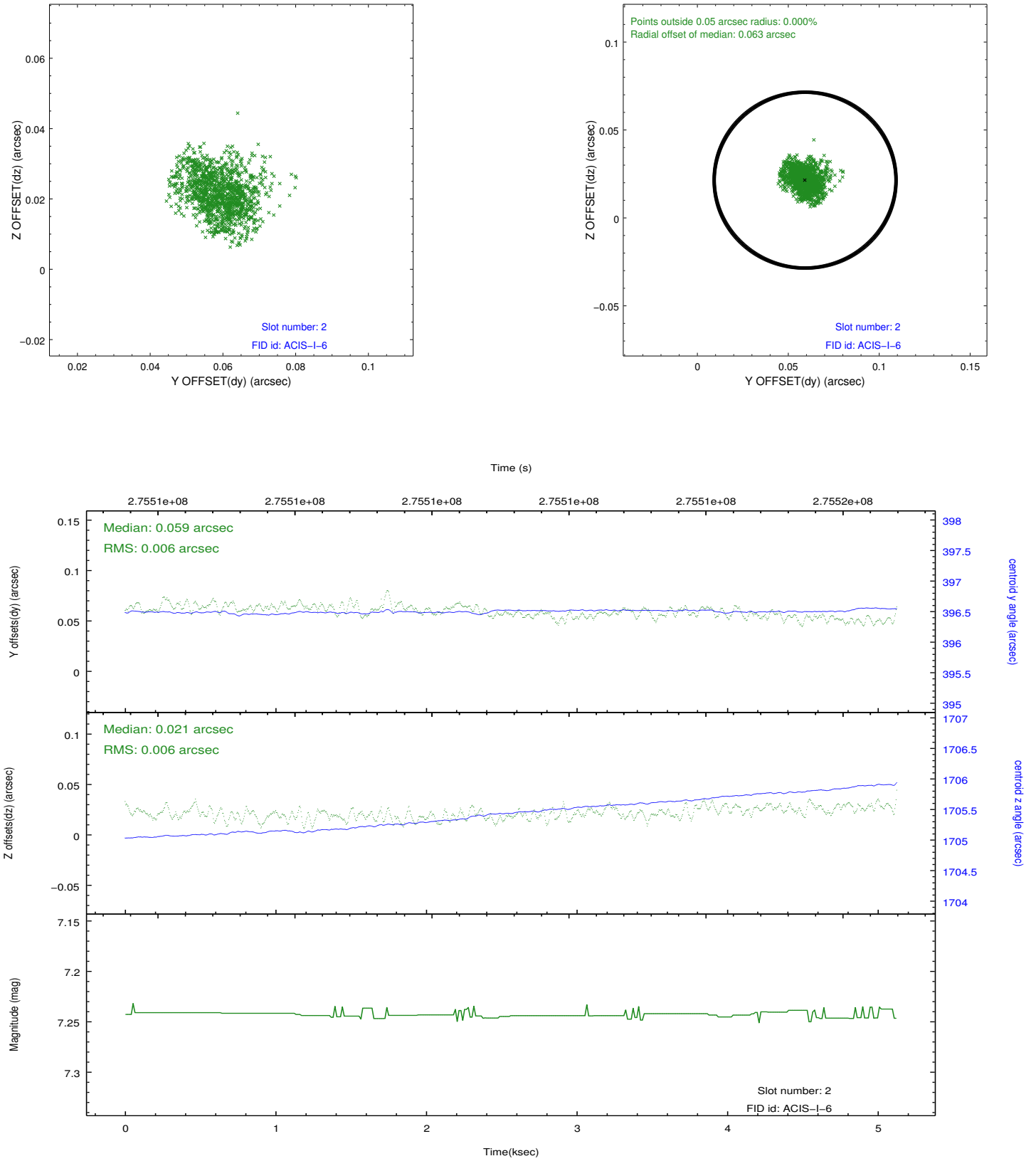
### 2.5.1 Slot 0



## 2.5.2 Slot 1



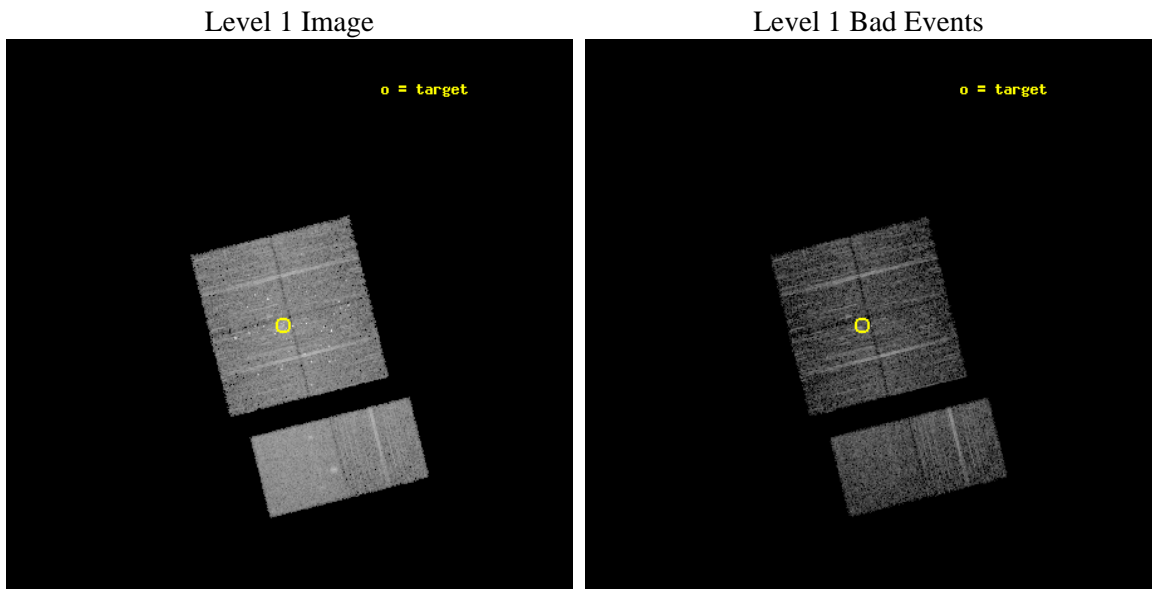
### 2.5.3 Slot 2



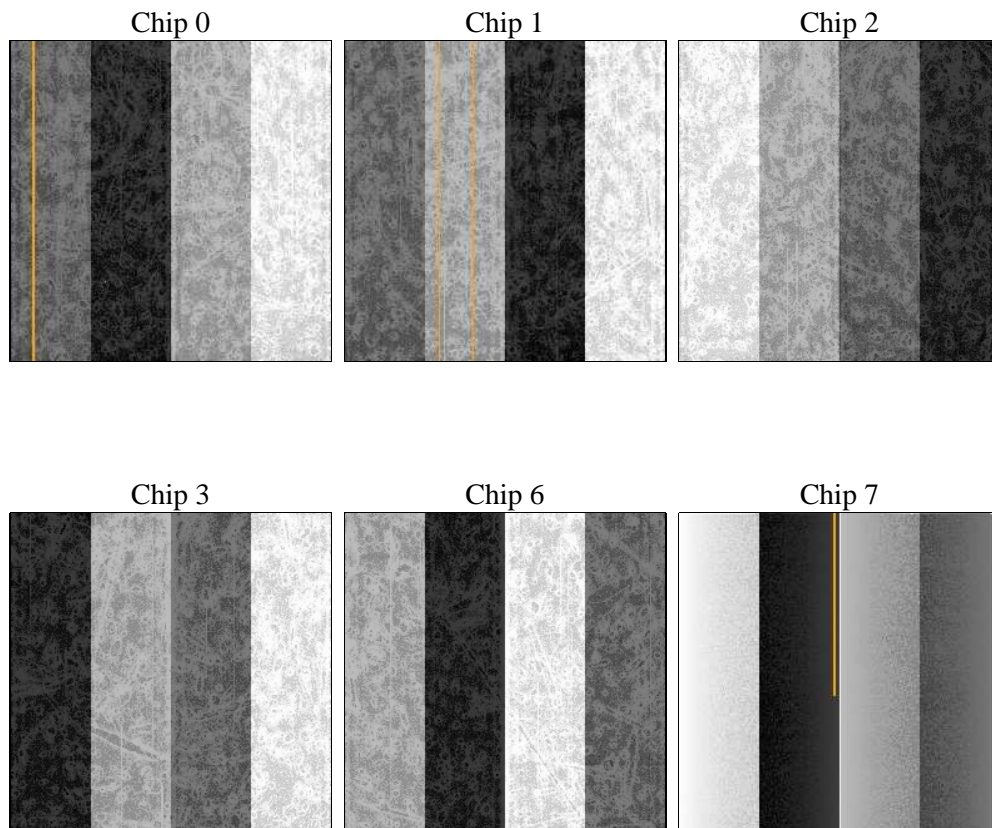
### 3 OBI Secondary

#### 3.1 OBI

##### 3.1.1 Images



##### 3.1.2 Bias



### 3.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	5000.643000	[s] Scheduled observation exposure time
ascdsver	8.4.3.1	Processing system revision	ontime	4170.200483799	Sum of GTIs [s]
caldsver	4.4.9	&#160	ontime0	4170.2007930279	Sum of GTIs [s]
date	2012-04-10T09:05:14	Date and time of file creation	ontime1	4170.2002446055	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	4170.2006836534	Sum of GTIs [s]
			ontime3	4170.200483799	Sum of GTIs [s]
			ontime6	4170.2006435394	Sum of GTIs [s]
			ontime7	4170.2002551556	Sum of GTIs [s]
			l1events	249413	Number of level 1 events

### 3.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	35860	37198	41006	42075	40494	52780
rejected events	30134	30463	32088	32751	35427	30238
rejected %	84%	81%	78%	77%	87%	57%

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
grade 0 events	2900	3436	5568	6015	2130	2149
	8%	9%	13%	14%	5%	4%
grade 1 events	33	37	125	73	26	54
	0%	0%	0%	0%	0%	0%
grade 2 events	1165	1340	1449	1406	1104	4527
	3%	3%	3%	3%	2%	8%
grade 3 events	482	524	576	581	428	2052
	1%	1%	1%	1%	1%	3%
grade 4 events	446	531	559	555	450	1972
	1%	1%	1%	1%	1%	3%
grade 5 events	1573	1625	1506	1728	1785	4937
	4%	4%	3%	4%	4%	9%
grade 6 events	836	1009	897	932	1019	12208
	2%	2%	2%	2%	2%	23%
grade 7 events	28425	28696	30326	30785	33552	24881
	79%	77%	73%	73%	82%	47%

## A Summary

### A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2012.04.10
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5.12030863

### A.2 Comments

Window constraint met.